



# United States Department of the Interior

U. S. GEOLOGICAL SURVEY  
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In Reply Refer To:  
Mail Stop 412

October 9, 2015

## OFFICE OF WATER QUALITY TECHNICAL MEMORANDUM 2016.01

**SUBJECT:** Publication of new chapter in the *National Field Manual for the Collection of Water-Quality Data*: Chapter 10, “Lakes and Reservoirs: Guidelines for Study Design and Sampling”

This memorandum announces the online publication of a new National Field Manual (NFM) chapter: Chapter 10, “Lakes and Reservoirs: Guidelines for Study Design and Sampling,” by W. Reed Green, Dale M. Robertson, and Francesca D. Wilde. The new chapter can be accessed from the home page of the NFM (<http://water.usgs.gov/owq/FieldManual/>) and is being incorporated in the complete compiled version of the NFM ([http://water.usgs.gov/owq/FieldManual/compiled/NFM\\_complete.pdf](http://water.usgs.gov/owq/FieldManual/compiled/NFM_complete.pdf)).

The primary purposes of this report are to:

1. Provide a review of the basic principles of limnological (lake and reservoir) science,
2. Provide USGS-specific sampling guidelines needed to design and implement studies in which lake or reservoir environmental quality can be reliably monitored and evaluated, and
3. Provide an explanation of the distinguishing characteristics of lakes and reservoirs, with special emphasis on the appropriate temporal and spatial strategies and approaches needed to account for differing data requirements.

Chapter 10 cross references standard USGS methods and quality-assurance protocols in the sampling and collection of water, bottom material, and biological components of lakes and reservoirs that are more fully described in other NFM chapters. Topics that are not addressed include the interactions of stream and groundwater systems with lakes or reservoirs. Also beyond the scope of this chapter are guidelines specific to sampling saline lakes or seas, the Great Lakes, ponds and stormwater detention or retention basins, lake-bottom sediment coring, and subsurface water bodies (such as those found in karst environments).

This report is intended to provide guidelines for all Water Mission Area and Water Science Center personnel and others who are involved in designing water-quality sampling programs or projects and who are involved in analysis and interpretation of water-quality data.

Donna N. Myers  
Chief, Office of Water Quality

Distribution: All WMA Employees